

The third typhoon of the season, Gilda, developed to typhoon strength 450 nm south-east of Okinawa on 2 July. Initial detection of the system was on 25 June about 400 nm north of Eniwetok as a weak circulation on the trailing edge of a surface trough which extended northeastward to the vicinity of Midway Island. The system tracked westward for five days displaying little marked development based on satellite data coverage. By the 29th, however, signs of increased organization became evident and, late the following day, Gilda's circulation had generated surface winds of tropical storm intensity.

Gilda began to move poleward on the 2nd and develop winds of typhoon strength as a stationary mid-tropospheric trough dominated eastern China. Early that day, the Japanese vessel SHINKYOKU MARU crossed southward just ahead of Gilda's path observing northwesterly winds of 45 knots and a pressure of 988.0 mb (02/0600Z).

The typhoon reached its peak intensity during the two-day period it approached the Ryukyu chain (Figure 4-5). Reconnaissance aircraft measured a 944 mb central pressure (04/1431Z) when the eye passed 70 nm southwest of Naha, Okinawa on the 4th. A peak gust of 85 knots was measured at the Naha Observatory (04/0840Z) during passage, while on Kume Jima a gust of 101 knots was registered several hours later (04/1550Z) when Gilda's eye passed 30 nm to the west.

Heavy rain and gusty winds from Gilda were responsible for almost a complete failure in Okinawa's electric power. Heavy rains (up to 10.8 inches at Naha) also accounted for numerous landslides and local

flooding. One person was reported killed and several fishing vessels sunk. Crops including sugarcane, bananas, and vegetables suffered extensive damage.

As the typhoon entered the East China Sea, it tracked northward around the western periphery of the mid-tropospheric subtropical ridge. Diminishing in intensity while approaching Cheju Do Island early on the 6th (Figure 4-6), Gilda responded to increasing upper level southwesterly flow over Manchuria, and began to accelerate. By the 7th, Gilda's circulation was in the Sea of Japan as an extratropical system heading toward southern Hokkaido.

Gilda brought torrential rains to Korea during passage near the southeast coast with total rainfall amounts exceeding 10 inches near coastal areas. The highest amount of 10.8 inches was measured at Kwangyang. The heavy rains caused flash flooding and landslides which completely or partially destroyed over 700 dwellings and left over 6000 homeless. Total damage loss was estimated at \$2.8 million, with casualties of 21 dead and 11 missing.

Meanwhile, Gilda's circulation activated a stationary front over western and central Japan producing torrential rains over a widespread area. The coastal town of Owase on the Kii peninsula reported an extreme 24 hour total of 16.5 inches. Newspaper reports indicated Gilda caused an estimated \$1.2 billion in property damage, including tens of thousands of flooded homes, damaged roads, and washed out railway lines and bridges. The toll in Japan from landslides and flash flooding accounted for 106 dead and 15 missing.

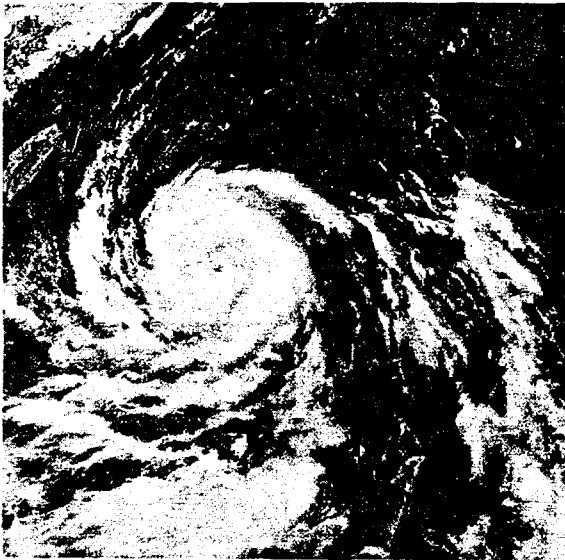


FIGURE 4-5. Typhoon Gilda near peak intensity 100nm southwest of Naha, Okinawa, 3 July 1974, 0227Z. (DMSP imagery)

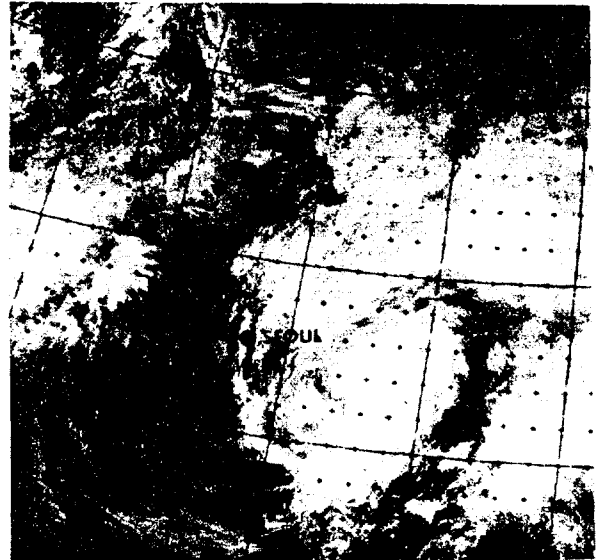


FIGURE 4-6. Typhoon Gilda acquiring extratropical characteristics in the Sea of Japan 180nm southeast of Seoul, Korea 7 July 1974, 0254Z. (DMSP imagery)